

EX PARTE OR LATE FILED

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)

Advanced Television Systems)
and Their Impact Upon the)
Existing Television Broadcast)
Service)

MM Docket No. 87-268

ORIGINAL

To: The Commission - Mail Stop 1170

EX PARTE SUPPLEMENT TO CBA'S PETITION FOR RECONSIDERATION

1. On December 2, 1997, the Commission released a public notice providing a 15-day period for comments on an *ex parte* filing in this proceeding, made on November 20, 1997, by the Association for Maximum Service Television, Inc. and other broadcasters ("MSTV"). The MSTV filing suggested 357 changes in the digital Table of Television Allotments. In response to the public notice and to the MSTV filing, the Community Broadcasters Association ("CBA") hereby submits this *ex parte* supplement to its pending petition for reconsideration of the *Sixth Report and Order* in this proceeding. CBA also responds briefly herein to a petition by the Association of Local Television Stations, Inc. ("ALTV") requesting power increases for some UHF stations operating in the digital mode.

2. CBA is the trade association of the nation's low power television ("LPTV") stations. It conducts various activities on behalf of LPTV and represents the interests of the LPTV industry in public policy forums. CBA has previously participated actively in this proceeding, taking strong exception to the disregard of the impact of the digital allotment table on LPTV broadcasters when it would be possible to accommodate all full power TV stations with a second

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channel with much less displacement of LPTV stations than would be caused by the tables proposed by the Commission and MSTV and adopted by the Commission to date.

3. The new MSTV filing continues to disregard LPTV and accordingly would have a unnecessarily and inappropriately disastrous impact on the LPTV industry and the unique local, minority, and niche programming services it provides. Thus in CBA's view, the MSTV table is not the answer to the problem of maximizing television service to the public and is in harmful to achieving that objective.

4. CBA has advised the Commission in earlier stages of this proceeding that despite its modest resources, it has managed to run the Commission's computer program that was used to create the digital allotment table. CBA used that program to generate a digital allotment table that would preserve much LPTV service that would be destroyed by the tables adopted by the Commission and proposed by MSTV. An initial table was submitted by CBA with its petition for reconsideration.

5. CBA has continued to work with the computer program, making refinements as quickly as possible. Now, through the efforts of Communications Consultant Robert W. Fisher, CBA offers what it believes is a viable tool for the Commission to use to decrease the number of co-channel LPTV displacements without sacrificing its objectives for the conversion of full power television to digital operation. The diskettes submitted with this pleading^{1/} contain a modification of the FCC's "anneal" program to include the addition of a conflict avoidance

^{1/} Copies of these diskettes are being provided to Robert Eckert of the Commission's Office of Engineering and Technology, Mr. Victor Tawil of MSTV, Mr. Lynn Claudy of the National Association of Broadcasters, ALTV, and Barbara S. Wellbery, Esq. of NTIA. They will be made available to others on request.

algorithm which automatically avoids displacing LPTV and translator stations when it is possible to do so. Although a complete DTV table of allotments is supplied along with the program, CBA does not suggest that this table is the ultimate optimum. Rather it is presented to demonstrate the effectiveness of the methods of the use of the "anneal16.out" computer routine.^{2/}

7. The analysis recognizes two major constraints that must be faced in developing a digital allotment table. First, there are three geographic areas which have serious interference problems -- New York City, Chicago, Los Angeles-San Diego areas. CBA understands that the Commission has worked with these areas manually, creating local allotment solutions. Second, the Commission has adopted a very short timeline for the commencement of digital service by the four network affiliates in each of the 30 largest markets. It is important to fix the channels on which these 120 stations will operate, so that they may go about the business of constructing digital facilities without delay. To make matters more complicated, some stations outside the top 30 markets have already filed construction permit applications for digital facilities, specifying the channel on which they anticipate operating.

8. The "anneal16" program modification can be used in a manner which would not in any way reduce the manual refinements in the three "problem" areas, impede the top 30 market rollout, or in any way change the channels which have already been filed for in various markets outside of the top 30. In other words, those specific allotments are left unchanged (*i.e.*, taken

^{2/} "Anneal16.out" is the computer routine. "Anneal.i4" is an allotment table, and "anneal.o4" shows interference costs, both derived from running "anneal16.out." They are text files that may be printed in WordPerfect 5.1 by opening them with any WordPerfect 5.x program and printing them with a fixed pitch small font (*e.g.*, courier 12 point). The other files are ancillary to the compute routine and may be displayed or printed as text files.

as "givens") in the program. What the program can do, however, is to eliminate the unnecessary displacement of LPTV and translator stations in locations where an alternative channel is available for full power digital operation which has little or no interference penalty associated with its use.

9. Specifically, "anneal16" incorporates an additional penalty of 16 square kilometers for displacing an existing licensed LPTV or translator station. The effect of this additional penalty is that when the program weighs the available digital channels for a full power station in a specific market, if there is a channel which has less than 16 sq. km. of interference and does not displace an LPTV/translator, the program prefers it over the displacing channel.^{3/} In many cases, in rural areas, there are numerous alternative channels which have no penalties. In such cases, the selection of one of these channels would be at no cost and would avoid a displacement. Additional information about the "anneal16" program is contained in an appendix hereto.

10. The Commission's "anneal" program has a feature built in which permits any specific channel to be "locked" in place. Where a channel is once entered and manually indicated in the input data with an asterisk, the program will not propose any change to the locked channel. This locking is the key feature which permits the "anneal16" program to be used to eliminate unnecessary LPTV/translator displacements while not affecting the rapid rollout of DTV service, not increasing interference in problem areas, and not affecting any DTV

^{3/} In fact, the penalty factors are somewhat more complex, as the program includes additional arbitrary penalties to protect Canadian stations, to avoid the use of Channel 6 to protect noncommercial educational FM broadcasting, etc.

construction permits for which applications are known already to have been filed. All three of those categories are locked in and so are not disturbed.

11. The reason that CBA cannot at this time propose what it believes is a final optimum digital allotment table is that the Commission is still reviewing petitions for reconsideration of the *Sixth Report and Order*, so CBA does not know which digital channels must be locked in when the "anneal16" program is run. Nevertheless, the program is a viable tool and should be run as a "post-processor" as soon as the Commission has made a final decision with respect to digital allotments in the problem interference areas and top 30 markets. With the dodging algorithm and with the "16" penalty associated with displacing an LPTV/translator, "anneal16" can be a very effective tool for eliminating unnecessary displacements.

12. In comparing the results of the *Sixth Report and Order's* table and the table created from "anneal16" submitted with this Supplement, the number of co-channel LPTV/translator displacements was reduced by nearly half, from 779 stations to 477 stations, with an increase in overall interference of approximately 2.5%. This amount is so small as to be within the range of statistical error for even the Commission's own table, yet it saves 302 stations that the Commission's table would displace. The interference will be decreased even further once the digital allotments for the identified problem areas are locked in place, because interference in those areas will be eliminated, although it is possible that fewer LPTV and translator stations will be saved from displacement.^{4/}

4/ The "anneal16" program was originally written as "anneal32" with a 32 sq. km. penalty for LPTV displacement. The result displaced only 394 out of 779 stations and saved 385 stations, but with an increase in overall interference of approximately 10%. Again, that amount of interference occurred significantly in problem markets and would likely have been reduced when
(continued...)

13. Whatever decision is made with respect to problem interference areas and the top 30 markets, and however much those decisions constrain operation of the program, "anneal16" is nevertheless demonstrated to be effective in reducing LPTV/translator displacements. With the supplied Sun executable file and Fortran source code file, it would take minimal effort for the Commission to run "anneal16" once the critical stations are locked in place. The result would result in great benefit by not forcing unnecessary displacements of operating LPTV and translator services that are today providing service to the public.

14. In light of the foregoing, CBA urges the Commission to review the software modifications submitted herewith and to use them to preserve LPTV and translator service to the maximum possible extent. Numerous LPTV and translator entities have filed pleadings in this proceeding demonstrating the service they provide. Calling those services "secondary" is

4/(...continued)

the final top 30 market allotment table is determined.

Summary of Results

<u>Anneal Penalty</u>	<u>Co-Channel LPTV/ Translator Displacements</u>	<u>LPTV/Translator Casualties Avoided</u>	<u>Interference Com- pared to FCC Table</u>
0	779	0	---
16	477	302	2.5%
32	394	385	10%

To avoid the inevitable criticism that CBA would almost surely face with a 10% increase in interference, even if that percentage were reduced later, CBA reduced the penalty to 16 sq. km. to reduce interference caused to within the realm of statistical error with respect to parity with the amount of interference caused by the Commission's allotment table in the *Sixth Report and Order*. The protection penalty can be varied up or down, and the number of LPTV/translators stations saved and/or interference caused will vary correspondingly. CBA feels that "anneal 16" is the proper tool to use, but the computer program can be varied to produce what the Commission finds to be an optimum result.

not an excuse for snuffing them out when it is not necessary to do so to achieve the objective of migrating full power TV from analog to digital. As CBA has discussed in earlier comments, the fair, efficient and equitable allocation of frequencies throughout the nation requires attention to all existing services, including LPTV and translator stations.

15. CBA also would like to comment briefly on the ALTV *ex parte* filing, which requests additional power for some UHF stations operating in the digital mode. While maximizing any station's coverage has some benefits, such benefits should not come at the expense of displacing existing LPTV services. Indeed, at par. 182 of the *Sixth Report and Order*, the Commission stated clearly that:

"[W]e will review all requests for modification of the DTV Table for their impact on low power stations. Industry coordinating committees therefore are strongly advised that they should consider LPTV and TV translator stations in developing proposed modifications to the DTV Table and avoid impact on such stations wherever possible."

The ALTV filing fails to adhere to the Commission's admonition.

16. In closing, CBA would like to respond to the Commission's invitation in the December 3 public notice to comment on the extent to which Channels 60-69 may be used for transitional purposes consistent with statutory mandates. CBA sees no reason why such channels may not be used during the transition where needed to preserve existing service to the public.^{5/} In this regard, CBA believes that its comments in ET Docket No. 97-157 were misunderstood by parties that attacked them in reply comments. CBA urged that frequencies on Channels 60-69 be assigned to public safety interests in an orderly fashion, filling up one TV channel before a

^{5/} The Commission should clearly grant displacement applications where LPTV stations seek to operate temporarily on Channels 60-69 during the digital transition because they have been forced off their existing channel by construction of a digital facility by a full power station.

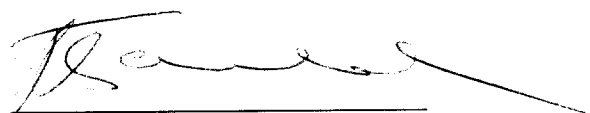
second one is occupied, thereby allowing more time for TV stations to transition out of the band. Some commenters noted that Congress has mandated that the reallocation of 24 MHz to public safety be completed by a date certain. However, it is not inconsistent with the statute to fill the frequencies in an orderly fashion or to use them transitionally for purposes other their permanent allocation. In other words, the allocation process may be completed now, but without assigning spectrum to new users in a disorderly fashion. CBA's point was directed to the assignment of spectrum to particular licensees, not the allocation process; and the point remains valid. Using Channels 60-69 for transitional purposes, and particularly to provide temporary homes for displaced LPTV's and translators, should be constrained only as and when new users have equipment in place and are actually ready to occupy those channels on an orderly and efficient basis.

Respectfully submitted,

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December 15, 1997



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APPENDIX TO CBA SUPPLEMENT

December 15, 1997

The anneal16 program modification is supplied as Fortran source code, which includes the additional code of logical function "nlpok". "nlpok" is a selection routine which scans block data lpchan_cities (chans_for_lpok and cities_for_lpok) to determine the cities and channels which should not have DTV stations assigned to them. In function nlpok, if a match is found which matches a market and a channel with an LPTV or translator in "lpchan_cities", then a penalty of 16 (sq km) is added to whatever other penalties were determined for the proposed channel. If other LPTV displacements are found on the proposed channel, no additional LPTV penalties are added. In most large markets, the 16 penalty is low in comparison with the other penalties from other sources in "anneal" so very little difference is made in the output. However, in the more rural areas, the 16 penalty may be the controlling penalty and will shift the channel selection process to "dodge" the LPTV/translator stations.

Block data "lpchan_cities" consists of a matching of all LPTV and translator licensees which are located within 160 km of their associated DTV markets. With the presumption that co-channel displacement is certain and that there are numerous solutions (ie. site change, antenna pattern change, co-location, etc.) available for adjacent channel problems, only co-channel conflicts were set to avoid. Also, only licensed LPTV and translator stations were considered in the data.

Function "nlpok" is used twice in subroutine "choices" and once again in subroutine "confirm_base". "chans_for_lpok" and "cities_for_lpok" are both contained in block data "lpchan_cities". All variables are declared in "data_structure.inc" and the "lptv_penalty" is defined in "demerits.inc". All other parts of the FCC's "anneal.f" program remain unchanged. The operation of "nlpok" is similar to other functions in "anneal.f" such as "ok_6" and "no_36_or_38"

The supplied computer information consists of the following elements:

anneal16.out	Compiled modified program with 16 sq km penalty assigned to LPTV displacements. Compiled to create an executable compatible with the FCC's Sun UltraSparc computers. Will directly run on an UltraSparc with no modifications.
anneallp.f	Modified fortran program source code. Includes the LPTV dodging algorithm.
data_str.inc	Modified fortran "include" file. Rename "data_structure.inc" for UNIX.

demerits.inc	Modified fortran "include" file.
anneal.i4	Digital table of allotments created by multiple iterations of the anneal16.out program which incorporates the "dodging" algorithm to avoid LPTV displacements.
anneal.o4	The anneal16.out program's analysis of the DTV table, indicating DTV to NTSC, DTV to DTV, NTSC to DTV spacing and interference criteria.

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CERTIFICATE OF SERVICE

I, Laura Ann Campbell, do hereby certify that I have, this 15th day of December, 1997, caused to be sent by first class United States mail, postage prepaid, copies of the foregoing "Ex Parte Supplement to CBA's Petition for Reconsideration" to the following:

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